

Effective Use of Dental Assistants

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Provision for adequate personnel to meet current demands for dental care services poses a challenge to the dental profession. Proved preventive measures can reduce the need, but, even if it were possible to apply preventive measures on a nation-wide scale, the need for dental care services would greatly exceed the capacity of the dental profession to supply them. And the prospect of a real increase in the number of dentists within the immediate future is not good.

According to Schoeny (1), "As nearly as it is possible to estimate, 9,200 dentists over and above those now in sight for the year 1954 will be required to maintain the present level of civilian dental services, to meet the special needs of industrial mobilization, to meet the minimum needs of an adequate civil defense program, and to meet the projected needs of the Armed Forces based upon a ratio of 2 per 1,000 troops strength. It is at once apparent that a substantial deficiency in dental manpower is already upon us and this deficiency is steadily increasing. It will not be possible to avoid or even reduce this deficiency before 1954. Whatever the demand, the present supply of dentists must meet all needs until then, or as soon thereafter as the training of additional dentists not now in process of education can be completed."

It seems imperative, therefore, that serious

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consideration be given to other means of increasing our capacity for providing dental care services.

One of the most rational and noncontroversial means of meeting this problem is through the effective utilization of trained assistants. The medical profession is far ahead of the dental profession in the use of auxiliary personnel. Physicians long since have realized the necessity and importance of increasing their professional services through effective use of auxiliary personnel.

Klein (2) estimates that the patient load per dentist can be increased from 33 to 75 percent through the use of trained assistants (fig. 1). Moen (3) found a great variation in the number of patients treated per dentist, according to whether or not the dentist employed auxiliary help. He found that dentists who employed one assistant averaged 37 percent more patients than those without such employees, while dentists employing two assistants averaged 69 percent more patients. These estimates are probably conservative.

Klein (2) also has estimated that approximately 55 percent of the dentists of this country employ dental assistants. Reporting for the bureau of economic research and statistics of the American Dental Association, Moen (4) found that 65.5 percent of the dentists responding to a survey employed at least one full-time dental assistant, technician, or hygienist. He estimated the total number of full-time dental assistants to be 55,200, assuming that there are 76,000 practicing dentists.

Unfortunately, only a relatively small number of dentists employing assistants utilize them to their full potential effectiveness. A review of the literature reveals a striking lack of specific information regarding the techniques

of good chairside assistance. Much time and space has been devoted to instruction in such duties as keeping the office neat and attractive, proper maintenance of equipment, sterilization of instruments, processing X-rays, making appointments, bookkeeping, and answering the telephone. All of these duties are essential to the efficient operation of a dental office or clinic. But it is unrealistic to expect that one dental assistant can perform these duties and still give effective chairside aid to the dentist. Adequate personnel should be employed to take care of both types of duties.

Use Requirements

The dentist should have a broad working concept of how to utilize assistants effectively. Through application of this concept and through experience, he must develop efficient utilization of personnel. The assistant must be fully informed of duty details and develop competence in their performance. Adequate auxiliary personnel must be available so that both the chairside assistance and the other duties of the office can be carried out efficiently and without interruption. Teamwork must be highly developed and coordinated.

Results to be expected are:

1. More dental-care services can be provided through use of a trained assistant because she

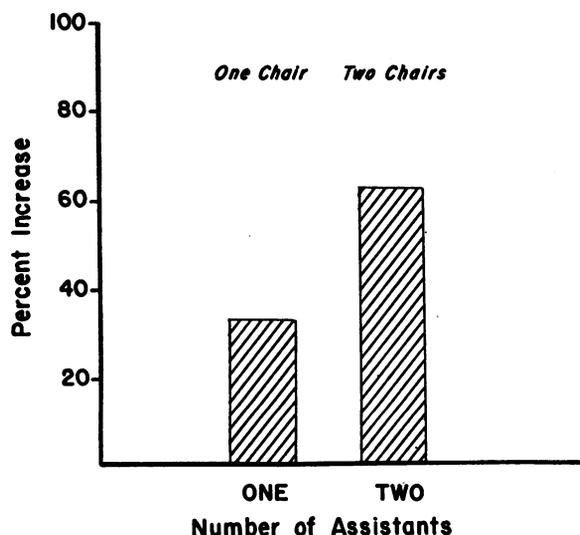


Figure 1. Percent increase in patients treated by dentists with chairside assistants. Percentage base is work of single dentist without an assistant—from Klein (2).

conserves the dentist's time by performing the numerous tasks incident to routine dental treatment, which the dentist would otherwise have to perform himself.

2. Quality of services is also improved because the dentist is under less physical and mental strain. He is able to concentrate his attention on what he is doing; he enjoys his work more, and, therefore, should produce better-quality work.

3. Better control of the patient is possible through the influence of an assistant.

4. Less mental and physical strain result since the activities incident to the service are being shared. The necessary armamentarium is as near as the dentist's hand. He can work from the seated position during the entire treatment procedure, and be less fatigued.

5. Provision of more services results in greater patient turn-over, which brings greater income.

6. The resultant increase in the number of patients treated decreases the tooth mortality rate per patient, reduces the incidence of caries through early detection and treatment, and makes available to the dentist more time for providing preventive treatment.

7. The technique of preparing cavities under water is readily accomplished with the help of a chairside assistant. Also, the appointment periods are shorter, resulting in less pain and discomfort to the patient.

These conclusions are based on the results of the Richmond study, where the emphasis has been placed on the effective utilization of dental assistants.

The Richmond Study

The complex problem of accumulated dental needs among children provided the basis for a 5-year clinical study of dental care, which was carried on in Richmond, Ind., by the Indiana State Board of Health and the city of Richmond, with the cooperation of the Public Health Service. The study began in December 1946 and was concluded in December 1951. One objective was to explore, under practical operating conditions, the possibilities of extending the services of dentists through the effective utilization of qualified auxiliary per-

sonnel, and thus to provide a basis for intelligent appraisal of dental manpower requirements in this and comparable communities.

There was a personnel assignment of approximately one and one-half trained assistants per operator, plus necessary clerical personnel and two complete units per operator.

The following personnel were on duty: five dentists, seven dental assistants, two clinic clerks, one oral hygienist, one dental health educator, and one stenographer.

Complete treatment, with the exception of orthodontics, was provided annually to approximately 5,500 children, from kindergarten through junior high school. Service of high quality was required and provided. We found that increased services develop naturally as the operator masters the techniques of efficient utilization of trained auxiliary personnel.

Several months prior to the inception of this research program, representatives of the Division of Dental Public Health of the Public Health Service spent considerable time in the offices of Dr. Roy O. Elam, Nashville, Tenn. His counsel and his demonstration of the effective use of dental assistants indicated that such a method would be practical in school dental clinics. Dr. Elam was a consultant from the beginning of the study.

The five dental assistants initially assigned to the Richmond study received 10 weeks of intensive training at the Naval Dental School, Bethesda, Md. There was some turnover in personnel. A new trainee began as clinic clerk. In addition to clerical duties, she devoted time to training as a dental assistant. Most of the training was provided by the experienced assistants.

Training included close observation of clinic routine; instructions in maintaining cleanliness and in the techniques of sterilization; learning the names, numbers, and location of the various instruments, and the proper set-up of instruments on the bracket tables; and, finally, specific use of each instrument and the routine of its use by operators in a clinic. During this training, in addition to becoming proficient as a clinic clerk, the trainee became an "aide" to the second, or roving, assistant. Three to four weeks of such training usually proved sufficient to qualify a trainee as a full-time second, or roving,

assistant. Three weeks as second assistant usually qualified her to become a chairside assistant. A trainee normally developed into an efficient chairside assistant in from 6 to 8 weeks of training.

Effect on Procedures

The use of chairside assistants modifies the usual procedure at the chair. The dentist, for example, can work from a seated position. The following description is illustrative.

Before the dentist takes his position on the operating stool, the chairside assistant has prepared the patient for treatment by properly adjusting the chair, and has provided the appropriate instrument set-up on the bracket table. If anesthesia is to be used, she prepares the syringe, hands it to the operator in such a manner as not to alarm the patient, and takes necessary precautions to guard against any sudden movement by the patient during the injection. As soon as the assistant knows which tooth is to be worked on, she places the proper bur or diamond instrument in the contra-angle and hands it to the dentist.

During the cavity preparation, the assistant flows water over the revolving bur or diamond instrument, retracts the tongue or cheek as required, using the saliva ejector to retract the tongue and her finger to retract the cheek. She dries the cavity for intermittent inspection and hands cutting instruments to the operator as required.

When the cavity is prepared, the chairside assistant isolates the tooth with cotton rolls and dries the cavity with cotton pellets and air. If a base is to be used, the dentist calls for it as the cavity preparation is being completed, so that by the time the cavity is ready for a base, a second assistant has mixed the cement and placed it on the bracket table; at this time she removes the contra-angle from the handpiece, replacing it with the automatic condenser containing the proper condensing point. The chairside assistant meanwhile has provided the matrix retainer and the band as requested. In a few seconds the operator can place the base and adjust the band. While he is doing this, the second assistant is mixing the alloy, which she places on a piece of gauze on the bracket

table. She removes all instruments from the table, with the exception of the condensers, carvers, mirror, explorer, and cotton pliers.

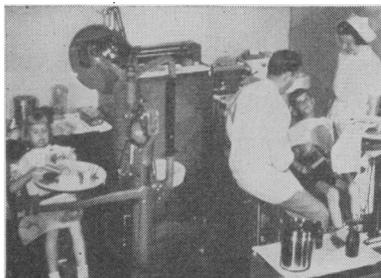
The filling material, in this instance alloy, is placed in the prepared cavity by the chairside assistant. As she places each carrierful, she hands the operator the condensers in the sequence in which he uses them.

During the carving of the filling, the chairside assistant hands the carvers to the operator in proper sequence, at the same time using the air syringe to blow away the amalgam scrapings.

Operators must develop techniques in which they use a minimum number of instruments and make proper use of such instruments to avoid confusing the chairside assistant. In this way the average assistant is soon able to anticipate the operator's every need.

While the chairside assistant is providing the afore-mentioned services, the second assistant is busy elsewhere in the clinic with such duties as preparing the next patient for treatment, cleaning and sterilizing instruments, mixing amalgam or cement, developing X-rays, or performing any one of the other innumerable duties. She also is capable of substituting for the chairside assistant at any time that it becomes necessary.

Film Demonstrates Use of Dental Assistants



Title: Dental Assistants—Their Effective Utilization, 16-mm., sound, color, 20 minutes, 1951 . . . Audience: dentists, dental assistants, dental students . . . Available by loan through State health departments; by purchase from Byron, Inc., 1226 Wisconsin Avenue, NW., Washington, D. C.

These pictures from the Public Health Service motion picture show how dental assistants were used in the 5-year dental health demonstration project in Richmond, Ind., sponsored by the city, the State health department, and the Public Health Service's Division of Dental Public Health.

The advantages to both dentist and patient of using two chairs and two dental assistants are shown for several dental procedures.

Every effort is made to conserve the time of the dentist. Each operation is analyzed to determine just which parts of the work should be delegated to assistant personnel.

Time and Motion Saved

In preparing the script of a motion picture (see illustrations) of the clinical aspects of the Richmond study, it was necessary to list the activities of the dentist, the chairside or first assistant, and the roving or second assistant. Including the seating of the patient, anesthesia, cavity preparation, the filling of three teeth with amalgam, carving of fillings, and dismissal of the patient, the number of activities were as follows: dentist, 33; first assistant, 57; second assistant, 39. The technique followed was routine; the number of instruments used and movements required were kept to a minimum consistent with high-quality service.

For this type of three-filling procedure, the difference in the workload when done by a dentist alone, with one, and with two assistants is shown in figure 2.

True, many of the activities performed by the dentist and the first assistant were synonymous, such as handling and receiving the various instruments. Such activities totaled 22,

The film does not attempt to present the technique of training dental assistants to the high degree of coordination and timing demonstrated in the film, but it does emphasize that this training is not difficult and that much can be accomplished in as little as 6 weeks.

The film underscores the concept that multiple chairs and assistants are one answer to the big question: "How can a limited number of dentists take care of an increasing number of people seeking dental attention?"